

In the Claims:

Claims 1-26 were previously canceled and claims 27-40 are amended as follows:

1 -26 Canceled.

27 (Currently Amended) A process to produce a direct reduced iron product from lump feed material, comprising:

providing lump feed material derived from naturally humid sedimentary iron ore having a microstructure consisting essentially of micropores;

drying said lump feed material to a temperature of 150°C to ~~about~~ less than 200°C and to a water content of less than 0.5% by weight; and

charging said dried lump feed material to a gas-based direct reduction process, thereby increasing the temperature of the dried lump feed material to more than 750°C within 30 minutes of said charging to said gas-based direct reduction process.

28 (Previously Presented) The process of claim 27, wherein said dried lump feed material is charged to the direct reduction process at a temperature of about 150°C.

29 (Previously Presented) The process of claim 27, wherein said step of drying said lump feed material includes placing it into a feed storage bin and oxidizing waste off-gases to heat said feed storage bin to effect said drying of said lump feed material.

- 30 (Previously Presented) The process of claim 29, further comprising charging said dried lump feed material from said feed storage bin to said direct reduction process via a thermally insulated charging system.
- 31 (Previously Presented) The process of claim 29, wherein said waste off-gases are supplied from a reformer associated with the direct reduction process.
- 32 (Previously Presented) The process of claim 29, wherein said waste off-gases are supplied to said storage bin at a temperature in excess of 300°C.
- 33 (Previously Presented) The process of claim 29, wherein said step of providing includes storing said lump feed material for a predetermined time of at least one month in an open atmosphere in a stockpile associated with said feed storage bin and thereafter drying said lump feed material.
- 34 (Currently Amended) A process to produce a direct reduced iron product from lump feed material, comprising:

providing lump feed material derived from naturally humid sedimentary iron ore having a microstructure consisting essentially of micropores;

storing said lump feed material for a predetermined time of at least one month in an open atmosphere in a stockpile associated with a feed storage bin;

drying said lump feed material to a temperature of 150°C to ~~about~~ less than 200°C and to a water content of less than 0.5% by weight; and

charging said dried lump feed material through a thermally insulated charging system to an upper part of a gas-based direct reduction furnace

and thereby increasing the temperature of said dried lump feed material to more than 750°C within 30 minutes of said charging.

35 (Currently Amended) A process for producing direct reduced iron from lump feed material, comprising:

providing said lump feed material derived from naturally humid sedimentary iron ore having a microstructure consisting mainly of micropores;

storing said lump feed material for a predetermined time of at least one month in an open atmosphere in a stockpile associated with a feed storage bin and thereafter reclaiming said lump feed material;

drying said lump feed material to a temperature of 150°C to ~~about~~ less than 200°C and to a water content of less than 0.5% by weight;

charging said lump feed material to a thermally insulated charging system to an upper part of a gas-based direct reduction furnace;

heating the direct reduction furnace to create an enhanced, narrow temperature profile inside the furnace thereby raising the average temperature inside the furnace; and

increasing the temperature of said charged lump feed material to more than 750°C within 30 minutes of said charging.

36 (Previously Presented) The process of claim 35, wherein said dried lump feed material is charged to said direct reduction process at a temperature of about 150°C.

37 (Currently Amended) A process for producing direct reduced iron from lump feed material, comprising:

providing said lump feed material derived from naturally humid sedimentary iron ore having a microstructure consisting mainly of micropores;

storing said lump feed material for a predetermined time of at least one month in an open atmosphere;

reclaiming said lump feed material to a feed storage bin, supplying waste off-gases to said feed storage bin to effect said drying of said lump feed material;

drying said lump feed material to a temperature of 150°C to ~~about~~ less than 200°C and to a water content of less than 0.5% by weight;

charging said lump feed material to a thermally insulated charging system to an upper part of a gas-based direct reduction furnace; and

increasing the temperature of said charged lump feed material to more than 750°C within 30 minutes of said charging.

38 (Previously Presented) The process of claim 37, further comprising charging said dried lump feed material from said feed storage bin to said direct reduction process via a thermally insulated charging system.

39 (Previously Presented) The process of claim 37, wherein said waste off-gases are supplied from a reformer associated with said direct reduction furnace.

40 (Previously Presented) The process of claim 37, wherein said waste off-gases are supplied at a temperature in excess of 300°C.